

Title (en)

Method for manufacturing neuraminic acid derivatives

Title (de)

Verfahren zur Herstellung von Neuraminsäurederivaten

Title (fr)

Procédé de fabrication de dérivés d'acide neuraminique

Publication

**EP 2360156 A1 20110824 (EN)**

Application

**EP 11003967 A 20080411**

Priority

- EP 08740613 A 20080411
- JP 2007103585 A 20070411

Abstract (en)

A method for manufacturing a compound represented by the formula (9) is provided: wherein R<sub>2</sub> represents a C<sub>1</sub>-C<sub>4</sub> alkyl group, R<sub>3</sub> represents a C<sub>1</sub>-C<sub>6</sub> alkyl group, R<sub>4</sub> and R<sub>5</sub>, independently from each other, represent a hydrogen atom, a C<sub>1</sub>-C<sub>6</sub> alkyl group or a phenyl group, or R<sub>4</sub> and R<sub>5</sub> together form a tetramethylene group, a pentamethylene group or an oxo group, and Ac represents an acetyl group.

IPC 8 full level

**C07D 239/28** (2006.01); **C07C 41/60** (2006.01); **C07D 309/28** (2006.01); **C07D 498/04** (2006.01)

CPC (source: EP KR US)

**A61K 31/351** (2013.01 - EP KR US); **A61P 31/16** (2017.12 - EP); **A61P 43/00** (2017.12 - EP); **C07C 41/60** (2013.01 - EP US);  
**C07D 231/14** (2013.01 - EP KR US); **C07D 309/28** (2013.01 - EP KR US); **C07D 407/06** (2013.01 - EP KR US);  
**C07D 498/04** (2013.01 - EP KR US)

C-Set (source: EP US)

**C07C 41/60 + C07C 43/32**

Citation (applicant)

- US 6340702 B1 20020122 - HONDA TAKESHI [JP], et al
- JP 3209946 B2 20010917
- US 6844363 B2 20050118 - MURAKAMI MASAYUKI [JP], et al
- JP 2002012590 A 20020115 - SANKYO CO
- T. HONDA ET AL., BIOORGANIC; MEDICINAL CHEMISTRY LETTERS, 2002, pages 1921 - 1924
- T. HONDA ET AL., BIOORGANIC MEDICINAL CHEMISTRY LETTERS, 2002, pages 1925 - 1928
- CARBOHYDRATE RESEARCH, vol. 167, 1987, pages 77 - 86
- JOURNAL OF AMERICAN CHEMICAL SOCIETY, vol. 64, 1942, pages 1825 - 1827

Citation (search report)

- [A] WO 9706157 A1 19970220 - BIOTA SCIENT MANAGEMENT [AU], et al
- [A] ANDREWS ET AL: "Synthesis and influenza virus sialidase inhibitory activity of analogues of 4-guanidino-Neu5Ac2en (Zanamivir) modified in the glycerol side-chain", EUROPEAN JOURNAL OF MEDICINAL CHEMISTRY, EDITIONS SCIENTIFIQUE ELSEVIER, PARIS, FR, vol. 34, 1 January 1999 (1999-01-01), pages 563 - 574, XP002160762, ISSN: 0223-5234

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CA 2783688 A1 20081023; CA 2783688 C 20140527; CN 101679339 A 20100324; CN 101679339 B 20130904; CN 102603691 A 20120725;  
CN 102603691 B 20160113; CN 102603722 A 20120725; CN 102603722 B 20140820; CN 102617295 A 20120801; CN 102617295 B 20150325;  
CN 102850311 A 20130102; CN 102850311 B 20141203; EP 2132191 A2 20091216; EP 2132191 B1 20130220; EP 2360135 A1 20110824;  
EP 2360135 B1 20121024; EP 2360151 A1 20110824; EP 2360151 B1 20130410; EP 2360156 A1 20110824; EP 2360156 B1 20131218;  
ES 2396203 T3 20130219; ES 2404411 T3 20130527; ES 2413704 T3 20130717; ES 2445715 T3 20140304; HK 1138594 A1 20100924;  
HK 1159084 A1 20120727; HK 1159085 A1 20120727; IL 201264 A0 20100531; IL 201264 A 20150831; IL 224943 A 20140430;  
IL 224944 A 20140430; JP 2010523472 A 20100715; JP 2013144701 A 20130725; JP 2014208698 A 20141106; JP 5249947 B2 20130731;  
JP 5686420 B2 20150318; JP 5807983 B2 20151110; KR 101414956 B1 20140704; KR 101506122 B1 20150325; KR 101551585 B1 20150908;  
KR 20100015460 A 20100212; KR 20140022471 A 20140224; KR 20140032481 A 20140314; KR 20150006075 A 20150115;  
KR 20150046361 A 20150429; TW 200846351 A 20081201; TW 201350492 A 20131216; TW 201350493 A 20131216;  
TW 201350494 A 20131216; TW I417297 B 20131201; TW I460182 B 20141111; TW I546306 B 20160821; TW I549956 B 20160921;  
US 2010035947 A1 20100211; US 2013197072 A1 20130801; US 2014018417 A1 20140116; US 2015259314 A1 20150917;  
US 2015376155 A1 20151231; US 2015376156 A1 20151231; US 2016052906 A1 20160225; US 8455659 B2 20130604;  
US 8575370 B2 20131105; US 9303008 B2 20160405; US 9309214 B2 20160412

DOCDB simple family (application)

**JP 2008057557 W 20080411;** BR PI0809601 A 20080411; CA 2683065 A 20080411; CA 2783587 A 20080411; CA 2783620 A 20080411;  
CA 2783688 A 20080411; CN 200880019205 A 20080411; CN 201210027019 A 20080411; CN 201210027020 A 20080411;  
CN 201210029291 A 20080411; CN 201210335674 A 20080411; EP 08740613 A 20080411; EP 11003967 A 20080411;  
EP 11003968 A 20080411; EP 11003969 A 20080411; ES 08740613 T 20080411; ES 11003967 T 20080411; ES 11003968 T 20080411;  
ES 11003969 T 20080411; HK 10105300 A 20100528; HK 11113348 A 20100528; HK 11113349 A 20100528; IL 20126409 A 20090930;  
IL 22494313 A 20130227; IL 22494413 A 20130227; JP 2009544071 A 20080411; JP 2013052760 A 20130315; JP 2014152751 A 20140728;  
KR 20097021107 A 20080411; KR 20147001749 A 20080411; KR 20147001750 A 20080411; KR 20147035341 A 20080411;  
KR 20157009090 A 20080411; TW 102130075 A 20080409; TW 102130076 A 20080409; TW 102130078 A 20080409;  
TW 97112808 A 20080409; US 201313795050 A 20130312; US 201313966863 A 20130814; US 201514724188 A 20150528;  
US 201514848648 A 20150909; US 201514848787 A 20150909; US 201514848876 A 20150909; US 45069908 A 20080411